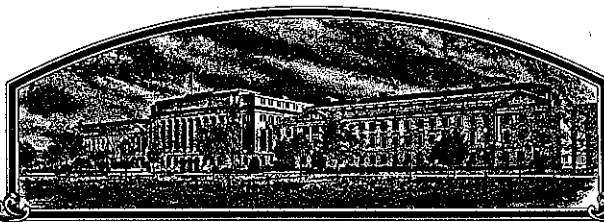


No.

8400063



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Nickerson American Plant Breeders, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'Success'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 27th day of September in the year of our Lord one thousand nine hundred and eighty-five.

Attest

Kenneth H. Evers
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

John R. B. Hill
Secretary of Agriculture

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY HS79-400		1b. VARIETY NAME Success		FOR OFFICIAL USE ONLY PV NUMBER 8400063	
2. KIND NAME Hard Red Spring Wheat		3. GENUS AND SPECIES NAME Triticum aestivum		FILING DATE 3-8-84	TIME 2:30 XXX P.M.
4. FAMILY NAME (BOTANICAL) Gramineae		5. DATE OF DETERMINATION 1) Spring of '79 2) Spring of '82		FEE RECEIVED \$ 1,800	DATE 3-8-84
6. NAME OF APPLICANT(S) NICKERSON North American Plant Breeders, Inc.		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 5201 Johnson Drive, P.O. Box 2955 Mission, KS 66201		8. TELEPHONE AREA CODE AND NUMBER 913-384-4940 KS 303-532-3721 CO	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation		10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION Delaware, January 19, 1983		11. DATE OF INCORPORATION 1-19-83	
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: G. E. Dixon R. E. HEINER ROBERT F. BRUNS P.O. Box 2955 P.O. Box 30 Mission, KS 66201 Berthoud, CO 80513					
13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:					
<input checked="" type="checkbox"/> 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)					
<input checked="" type="checkbox"/> 13B. Exhibit B, Novelty Statement.					
<input checked="" type="checkbox"/> 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)					
<input checked="" type="checkbox"/> 13D. Exhibit D, Additional Description of the Variety.					
<input checked="" type="checkbox"/> 13E. Exhibit E. Quality and Statistical Data.					
14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO					
14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED		
15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "Yes," give name of countries and dates.)					
15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "Yes," give name of countries and dates.)					

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? ☒ YES ☐ NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

17 February 1984
(DATE)

20 February 1984
(DATE)

Robert E. Heiner
(SIGNATURE OF APPLICANT)

G. E. Dixon
(SIGNATURE OF APPLICANT)

Origin and Breeding History of Success

Pedigree: Era/3/Polk/Tobari//Fletcher

History: The F₂ population was obtained from the University of Minnesota in 1977. Success originated from a single F₃ head selection in 1978. An F₄ bulk of this selection was first entered into yield trials in 1979 under the experimental number HS79-400. This line has been in wide scale testing in the Red River Valley of the upper Midwest during the 1980 through 1983 seasons. Additionally, it was tested throughout the spring wheat region in the Uniform Regional Nursery during the 1982 season.

Two hundred ninety-six heads were pulled from the F₅ generation of the original bulk in the 1980 season. These were grown in head-rows for initial purification at Berthoud, Colorado in 1981. Of these, 16 rows (5%) were discarded due to taller height and two rows (.7%) were discarded due to earlier heading. In the 1982 season, the remaining bulked head-rows were grown to produce the breeder seed lot.

Success is uniform and pure. Less than .5% of the plants have been rogued from the breeder seed field in 1982. Ninety-five percent of these rogued plants were three to five centimeters taller than Success. Less than .05% of these taller plants may be expected in subsequent generations.

8400063

Exhibit B

Novelty Statement

Success is most similar to the hard red spring wheat Kitt. However, it can be distinguished by the following morphological characteristics:

- Success and Kitt differ significantly in acuminate beak length; Success has a shorter beak length (see statistical data Exhibit E., page 2).
- Success is a green plant color at anthesis. Kitt is a blue-green plant color at anthesis.

Anova Table for Beak Length of Varieties Success and Kitt

<u>Source</u>	<u>df</u>	<u>ss</u>	<u>ms</u>
Total	49	290.55	
VAR	1	222.18	222.18
Error	48	68.37	1.42

F Test = 154.47**
LSD (.05) = .67

<u>Variety</u>	<u>Mean</u>
Kitt	7.54 mm
Success	3.32 mm

The probability that the means for beak length are significantly different at the 5% and 1% alpha level.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S) NICKERSON North American Plant Breeders, Inc.	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 5201 Johnson Drive, P.O. Box 2955 Mission, KS 66201	PVPO NUMBER 8400063
	VARIETY NAME OR TEMPORARY DESIGNATION Success

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g., 089 or 09) when number is either 99 or less or 9 or less.

1. KIND:
1 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:
1 1 = SPRING 2 = WINTER 3 = OTHER (Specify) _____ 2 1 = SOFT 2 = HARD 3 = OTHER (Specify) _____
2 1 = WHITE 2 = RED 3 = OTHER (Specify) _____

3. SEASON - NUMBER OF DAYS FROM _____ TO: _____
089 FIRST FLOWERING Planting 095 LAST FLOWERING

4. MATURITY (50% Flowering):
-- NO. OF DAYS EARLIER THAN _____ - 1 = ARTHUR 2 = SCOUT 3 = CHRIS
01 NO. OF DAYS LATER THAN _____ 7 4 = LEMHI 5 = NUGAINES 6 = LEEDS 7 = Kitt

5. PLANT HEIGHT (From soil level to top of head):
088 CM. HIGH
05 CM. TALLER THAN _____ 7
-- CM. SHORTER THAN _____ - 1 = ARTHUR 2 = SCOUT 3 = CHRIS
4 = LEMHI 5 = NUGAINES 6 = LEEDS 7 = Kitt

6. PLANT COLOR AT BOOTING (See reverse):
2 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHUR COLOR:
1 1 = YELLOW 2 = PURPLE

8. STEM:
1 Anthocyanin: 1 = ABSENT 2 = PRESENT
2 Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT
04 NO. OF NODES (Originating from node above ground)

9. AURICLES:
1 Anthocyanin: 1 = ABSENT 2 = PRESENT
2 Waxy bloom: 1 = ABSENT 2 = PRESENT
1 Internodes: 1 = HOLLOW 2 = SOLID
18 CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

10. LEAF:
2 Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 3 = OTHER (Specify): _____ 2 Flag leaf: 1 = NOT TWISTED 2 = TWISTED
2 Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT 2 Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT
15 MM. LEAF WIDTH (First leaf below flag leaf) 27 CM. LEAF LENGTH (First leaf below flag leaf):

FORM GR-470-6 (REVERSE)

11. HEAD:

3 Density: 1 = LAX 2 = DENSE 3 = middense average 48.0 1 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE
4 Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED 4 = OTHER (Specify) _____
1 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED
5 = BROWN 6 = BLACK 7 = OTHER (Specify): _____
9.0 CM. LENGTH 1 1 MM. WIDTH

12. GLUMES AT MATURITY:

2 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 3 = LONG (CA. 9 mm.) average 8.1 mm **2** Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.) 3 = WIDE (CA. 4 mm.) average 3.5 mm

Shoulder 1 = WANTING 2 = OBLIQUE 3 = ROUNDED
2 shape: 4 = SQUARE 5 = ELEVATED 6 = APICULATE

3 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE
average 3.4

13. COLEOPTILE COLOR:

1 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

1 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

2 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

3	Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL	1	Cheek: 1 = ROUNDED 2 = ANGULAR
2	Brush: 1 = SHORT 2 = MEDIUM 3 = LONG	1	Brush: 1 = NOT COLLARED 2 = COLLARED
4-5	Phenol reaction (See instructions): 1 = IVORY. 2 = FAWN 3 = LT. BROWN 4 = BROWN 5 = BLACK 4=91% Brown 5=9% Black		
3	Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____		
6	1 MM. LENGTH	3	1 MM. WIDTH
		3	6 GM. PER 1000 SEEDS

17. SEED CREASE:

<div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;">1</div>	Width: 1 = 60% OR LESS OF KERNEL 'WINOKA'	<div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;">1</div>	Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT'
	2 = 80% OR LESS OF KERNEL 'CHRIS'		2 = 35% OR LESS OF KERNEL 'CHRIS'
	3 = NEARLY AS WIDE AS KERNEL 'LEMHI'		3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3 = moderately susceptible 4 = moderately resistant

2	STEM RUST (Races)	4	LEAF RUST (Races)	field races	0	STRIPED RUST (Races)	0	LOOSE SMUT
0	POWDERY MILDEW	0	BUNT		0	OTHER (Specify)		

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3 = moderately susceptible 4 = moderately resistant

<input type="checkbox"/> SAWFLY	<input type="checkbox"/> APHID (<i>Bydv.</i>)	<input type="checkbox"/> GREEN BUG	<input type="checkbox"/> CEREAL LEAF BEETLE			
<input type="checkbox"/> OTHER (Specify) _____	HESSIAN FLY RACES:	<input type="checkbox"/> GP	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	
		<input type="checkbox"/> D	<input type="checkbox"/> E	<input type="checkbox"/> F	<input type="checkbox"/> G	

10. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Kitt	Seed size	Kitt
Leaf size	Kitt	Seed shape	Kitt
Leaf color	Kitt	Coleoptile elongation	Kitt
Leaf carriage	Kitt	Seedling pigmentation	Kitt

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

- (a) L.W. Briggles and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.
- (b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

Exhibit D

Additional Description of Success

NICKERSON

Success is a hard red spring wheat developed by North American Plant Breeders, Inc. It was tested as the experimental number HS79-400.

Success is a tall semidwarf variety with medium-strong straw strength and late maturity. Its breadmaking quality is satisfactory. Its protein and bake absorption levels are slightly higher than the variety, Era.

Juvenile plant growth habit is semi-erect. Plant color at boot is green with a recurved, twisted flag leaf. Head shape is tapering to strap, middense, awned and head color is white at maturity. Glumes are of medium length and width with oblique shoulders and acuminate beaks. Seed shape is elliptical to ovate with rounded cheeks. Seed crease width is narrow and depth is shallow.

Success is adapted to the spring wheat region of North and South Dakota, and Minnesota.

Success
HS79-400
1/23/85

YEAR: 1983

North American Plant Breeders
HARD RED SPRING WHEAT QUALITY

PAGE 1

WHEAT--FLOUR QUALITY										BAKING QUALITY										TOTAL SCORE	
YEAR	SAMPLE NAME	LOC	TEST WT.	WHT PROT	14%mb	%	FLR YLD	FLR PROT	14%mb	FLR ASH	MIX CURVE	ABS. %	MIX TIME	DOUGH CHAR	LOAF VOL	CRUMB			MILL SCORE		BAKE SCORE
																GRN	TEX	COL			
			lb/Bu	14%mb	%	14%mb	%	14%mb	%	14%mb	R	%	min	R	cc	R	R	R			
79	H579-400	HU	57.6	13.0	72.7	11.4	0.493	7			62.0	4.5	7	1000+	7	6	9	75-C	83-B	158-C	
79	H579-400	CY	61.4	12.9	75.6	11.7	0.420	8			66.0	4.0	8	945	6	7	9	81-B	86-B	167-B	
80	H579-400	HU	59.3	13.9	63.1	11.1	0.377	4			58.0	5.0	6	1000	8	7	9	60-D	75-C	135-C	
81	H579-400	CR	56.4	13.3	69.9	11.7	0.511	6			65.0	3.3	8	975	7	7	8	67-D	86-B	153-C	
81	H579-400	HU	57.3	15.1	68.0	14.1	0.472	8			65.0	3.5	8	990	8	9	9	84-B	92-A	176-B	
81	H579-400	CY	58.5	12.9	72.6	10.7	0.597	6			64.0	3.3	9	960	8	7	8	69-D	86-B	153-C	
82	H579-400	CR	59.3	14.3	68.6	13.0	0.495	6			63.0	3.3	9	1000+	8	9	9	79-C	90-A	169-B	
82	H579-400	CY	62.5	13.1	72.2	12.3	0.457	6			63.0	2.8	8	925	8	8	9	79-C	82-B	161-B	
82	H579-400	HU	56.9	14.8	65.9	13.0	0.487	5			63.0	4.0	9	850	8	8	9	68-D	85-B	153-C	
83	H579-400	CX	59.6	13.8	75.4	12.3	0.481	6			63.0	2.8	8	840	8	8	9	81-B	78-C	159-C	
83	H579-400	CY	56.9	14.3	73.2	13.4	0.427	6			64.0	3.0	8	940	8	8	9	81-B	86-B	167-B	
83	H579-400	HU	53.2	16.2	68.3	14.9	0.521	7			65.0	3.5	8	1000+	8	8	9	74-C	93-A	167-B	
AVERAGE			58.2	14.0	70.5	12.5	0.478	6			63.4	3.6	8	965	8	8	9	79-C	87-B	166-B	
79	ERA	HU	57.2	14.1	73.9	12.3	0.426	8			63.0	4.5	7	970	6	6	9	84-B	82-B	168-B	
79	ERA	CY	62.5	12.6	74.6	11.0	0.400	8			59.0	5.0	8	980	7	6	9	79-C	73-C	152-C	
80	ERA	HU	60.2	13.4	66.2	10.9	0.494	4			56.0	4.5	7	1000+	8	7	9	58-F	78-C	136-C	
81	ERA	CR	57.2	12.6	70.4	10.9	0.526	5			62.0	4.8	8	980	7	7	8	62-D	82-B	144-C	
81	ERA	HU	56.8	15.6	66.7	13.9	0.563	8			66.0	4.3	8	1000+	8	8	9	78-C	93-A	171-B	
81	ERA	CY	60.0	12.6	70.6	10.8	0.451	5			61.0	5.0	9	940	8	7	8	66-D	79-C	145-C	
82	ERA	CR	61.4	13.5	72.3	11.4	0.436	6			62.0	3.8	8	950	8	8	9	77-C	86-B	163-B	
82	ERA	CY	61.7	13.5	73.8	11.9	0.452	6			63.0	4.3	9	960	7	8	9	79-C	87-B	166-B	
82	ERA	HU	58.8	14.2	70.7	12.8	0.423	4			60.0	5.0	8	1000+	8	9	9	74-C	83-B	157-C	
83	ERA	CX	60.8	13.4	73.1	12.0	0.447	6			62.0	4.5	8	900	8	8	9	79-C	84-B	163-B	
83	ERA	CY	58.3	14.1	72.2	12.9	0.486	5			62.0	4.0	8	1000+	8	9	9	80-B	89-B	169-B	
83	ERA	HU	54.6	15.3	67.6	14.1	0.507	7			64.0	4.0	8	1000+	9	8	9	74-C	92-A	166-B	
AVERAGE			59.1	13.7	71.0	12.1	0.468	6			61.7	4.5	8	994	8	8	9	79-C	86-B	165-B	
GRADES:		A-EXCELLENT		B-GOOD		C-ACCEPTABLE		D-QUESTIONABLE		F-UNACCEPTABLE											
RATINGS:		9-10=EXCELLENT		8=GOOD		7=ACCEPTABLE		5-6=QUESTIONABLE		1-4=UNACCEPTABLE											

GRADES: A-EXCELLENT 9-10-EXCELLENT B-GOOD 8-GOOD C-ACCEPTABLE 7=ACCEPTABLE D-QUESTIONABLE 5-6=QUESTIONABLE F-UNACCEPTABLE 1-4=UNACCEPTABLE